RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number:	/0/591,432
Source:	IFWP,
Date Processed by STIC:	9/13/06
J	

ENTERED



IFWP

RAW SEQUENCE LISTING DATE: 09/13/2006 PATENT APPLICATION: US/10/591,432 TIME: 13:16:43

Input Set : N:\RJAVED\10591432.txt

3 <110> APPLICANT: Frohberg, Claus

Output Set: N:\CRF4\09132006\J591432.raw

```
Koetting, Oliver
              Ritte, Gerhard
              Steup, Martin
      8 <120> TITLE OF INVENTION: Plants with increased activity of multiple starch
phosphorylating enzymes
     10 <130> FILE REFERENCE: 65084.000022
C--> 12 <140> CURRENT APPLICATION NUMBER: US/10/591,432
     13 <141> CURRENT FILING DATE: 2006-09-01
     15 <150> PRIOR APPLICATION NUMBER: EP 04090089.6
     16 <151> PRIOR FILING DATE: 2004-03-05
     18 <150> PRIOR APPLICATION NUMBER: US 60/550,021
     19 <151> PRIOR FILING DATE: 2004-03-05
     21 <150> PRIOR APPLICATION NUMBER: EP 04090284.3
     22 <151> PRIOR FILING DATE: 2004-07-21
     24 <150> PRIOR APPLICATION NUMBER: EP 04090121.7
     25 <151> PRIOR FILING DATE: 2004-03-29
     27 <160> NUMBER OF SEQ ID NOS: 39
     29 <170> SOFTWARE: PatentIn version 3.1
     31 <210> SEO ID NO: 1
     32 <211> LENGTH: 3591
     33 <212> TYPE: DNA
     34 <213> ORGANISM: Arabidopsis thaliana
     36 <220> FEATURE:
     37 <221> NAME/KEY: CDS
     38 <222> LOCATION: (1)..(3591)
     39 <223> OTHER INFORMATION:
W--> 42 < 400 > 1
     43 atg gag agc att ggc agc cat tgt tgc agc tct cct ttc acc ttc atc
                                                                               48
     44 Met Glu Ser Ile Gly Ser His Cys Cys Ser Ser Pro Phe Thr Phe Ile
     45 1
                        5
     47 act aga aac tca tca tca ctt cct aga ctc gtt aac atc act cac
                                                                               96
     48 Thr Arg Asn Ser Ser Ser Leu Pro Arg Leu Val Asn Ile Thr His
     51 aga gtt aat ctc agc cac caa tct cac cga ctc aga aac tcc aat tct
                                                                              144
     52 Arg Val Asn Leu Ser His Gln Ser His Arg Leu Arg Asn Ser Asn Ser
     53
                35
                                    40
     55 cgt ctc act tgc act gct act tct tcc acc att gag gaa caa cgg
                                                                              192
     56 Arg Leu Thr Cys Thr Ala Thr Ser Ser Ser Thr Ile Glu Glu Gln Arg
                                55
     59 aag aag aaa gat gga tca gga acg aaa gtg agg ttg aat gtg agg tta
                                                                              240
     60 Lys Lys Lys Asp Gly Ser Gly Thr Lys Val Arg Leu Asn Val Arg Leu
                            70
                                                75
     63 gat cat caa gtt aat ttt ggt gac cat gtg gct atg ttt gga tca gct
                                                                              288
```

65 85 90 95	
67 aaa gag att ggt tca tgg aaa aag aaa tcg cct ttg aat tgg agt gag	336
68 Lys Glu Ile Gly Ser Trp Lys Lys Lys Ser Pro Leu Asn Trp Ser Glu	
69 100 105 110	
71 aat gga tgg gtt tgt gag ttg gaa ctt gac ggt ggt cag gtt ttg gag	384
72 Asn Gly Trp Val Cys Glu Leu Glu Leu Asp Gly Gly Gln Val Leu Glu	
73 115 120 125	
75 tat aag ttt gtc att gtt aag aat gat ggt tca ctt tca tgg gaa tct	432
76 Tyr Lys Phe Val Ile Val Lys Asn Asp Gly Ser Leu Ser Trp Glu Ser	
77 130 135 140	400
79 ggt gat aat cgt gtc ctt aag gtt cca aat tct ggg aat ttt tct gtt	480
80 Gly Asp Asn Arg Val Leu Lys Val Pro Asn Ser Gly Asn Phe Ser Val 81 145 150 155 160	
81 145 150 155 160 83 gtt tgt cat tgg gat gct act aga gaa acc ctt gat ttg cct cag gag	528
84 Val Cys His Trp Asp Ala Thr Arg Glu Thr Leu Asp Leu Pro Gln Glu	320
85 165 170 175	
87 gtt ggt aat gat gat gtt ggt gat ggg cat gag agg gat aat	576
88 Val Gly Asn Asp Asp Asp Val Gly Asp Gly His Glu Arg Asp Asn	370
89 180 185 190	
91 cat gat gtt ggt gat gat aga gta gtg gga agt gaa aat ggt gcg cag	624
92 His Asp Val Gly Asp Asp Arg Val Val Gly Ser Glu Asn Gly Ala Gln	
93 195 200 205	
95 ctt cag aag agt aca ttg ggt ggg caa tgg caa ggt aaa gat gcg tcc	672
96 Leu Gln Lys Ser Thr Leu Gly Gly Gln Trp Gln Gly Lys Asp Ala Ser	
97 210 215 220	
99 ttt atg cgt tct aat gat cat ggt aac aga gaa gtt ggt aga aat tgg	720
100 Phe Met Arg Ser Asn Asp His Gly Asn Arg Glu Val Gly Arg Asn Trp	
101 225 230 235 240	
103 gat act agt ggt ctt gaa ggc aca gct ctt aag atg gtt gag ggt gat	
	768
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp	768
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105 245 250 255	
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105 245 250 255 107 cgc aac tct aag aac tgg tgg aga aag ctt gaa atg gta cgc gag gtt	768 816
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105 245 250 255 107 cgc aac tct aag aac tgg tgg aga aag ctt gaa atg gta cgc gag gtt 108 Arg Asn Ser Lys Asn Trp Trp Arg Lys Leu Glu Met Val Arg Glu Val	
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105 245 250 255 107 cgc aac tct aag aac tgg tgg aga aag ctt gaa atg gta cgc gag gtt 108 Arg Asn Ser Lys Asn Trp Trp Arg Lys Leu Glu Met Val Arg Glu Val 109 260 265 270	816
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816 864
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816 864
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816 864 912
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816 864
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816 864 912
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816 864 912
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816 864 912 960
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816 864 912 960
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816 864 912 960
104 Asp Thr Ser Gly Leu Glu Gly Thr Ala Leu Lys Met Val Glu Gly Asp 105	816 864 912 960 1008

129				340					345					350			
	ttc	aaa	gca		+++	act	aca	act		cct	cta	act	caa		agg	gac	1104
	Phe		_				_	_	-							_	1101
133		-70	355	014				360			Lou		365		••••		
	ata	acc		caa	aat	gat	att		cat	gat	ctc	aaα		gaa	atc	aaα	1152
	Ile					_				_		_		-		-	1132
137	110	370	1115	9	non	пор	375	110	1115	пор	Вси	380	0111	Oru	110	БуЗ	
	cat		ata	саа	aat	aad	_	Cac	caa	aat	act		cca	gaa	gat	cta	1200
	His																1200
	385	****		0111	11011	390	пси		****9	71011	395	O ₁	110	Olu	пор	400	
	att	gca	aca	gaa	aca		ctt	caa	cga	att		gag	acc	cca	gga		1248
	Ile	_		_	_	_			_								12.10
145				014	405		Leu	01	****9	410	****	014			415	2,0	
	tat	agt	gga	gac		ata	gag	cad	+++		ata	ttc	cat	aat		ctt	1296
	Tyr	_		_				_									1230
149	-1-		0.7	420			014	01	425	2,0	110			430	014	Dea	
	aaa	gat	ttc	_	aat	act	gga	aαt		act	gaa	cad	ctt		tct	atα	1344
	Lys																
153	_,_	1106	435				- 1	440			014	· · · ·	445	пор			
	aaa	att		at.g	gat.	gat	aαa		ctt	tict	aca	ct.c		t.t.a	ttt	ttt	1392
	Lys																
157	-1-	450				F	455	V-1				460					
	gaa		aaa	aaσ	cac	ctt		aca	t.ca	gga	gaa		agc	aat.	att	t.t.a	1440
	Glu																
	465	-1-	-1-	-1-	5	470				1	475					480	
	gag	tta	att	aaa	acc		cat	tct	cta	act		tta	aga	gaa	aca		1488
	Glu	_				-				-			_	-			
165				-1 -	485					490			5		495		
167	ata	aaq	qaa	ctt	aat	aqc	qqc	ttq	cqa	aat	gat	qct	cct	qat	act	qcc	1536
	Ile	_				_		_	_		_	_		_		_	
169		•		500			_		505		-			510			
171	att	gca	atq	cqc	caq	aaq	tgg	cqc	ctt	tqt	qaq	atc	qqc	ctc	qaq	qac	1584
	Ile																
173			515	_		-	_	520		-			525			_	
175	tac	ttt	ttt	gtt	cta	cta	agc	aga	ttc	ctc	aat	gct	ctt	gaa	act	atg	1632
176	Tyr	Phe	Phe	Val	Leu	Leu	Ser	Arg	Phe	Leu	Asn	Ala	Leu	Glu	Thr	Met	
177		530					535					540					
179	gga	gga	gct	gat	caa	ctg	gca	aaa	gat	gtg	gga	tca	aga	aac	gtt	gcc	1680
180	Gly	Gly	Ala	Asp			Ala	Lys	Asp	Val	Gly	Ser	Arg	Asn	Val	Ala	
181	545					550					555					560	
183	tca	tgg	aat	gat	cca	cta	gat	gct	ttg	gtg	ttg	ggt	gtt	cac	caa	gta	1728
184	Ser	Trp	Asn	Asp	Pro	Leu	Asp	Ala	Leu	Val	Leu	Gly	Val	His	Gln	Val	
185					565					570					575		
187	ggt	cta	tct	ggt	tgg	aag	caa	gaa	gaa	tgt	tta	gcc	att	gga	aat	gaa	1776
188	Gly	Leu	Ser	Gly	Trp	Lys	Gln	Glu	Glu	Cys	Leu	Ala	Ile	Gly	Asn	Glu	
189				580					585					590			
191	ctc	ctt	gct	tgg	cga	gaa	agg	gac	cta	ctt	gaa	aaa	gaa	ggg	gaa	gag	1824
192	Leu	Leu	Ala	${\tt Trp}$	Arg	Glu	Arg	Asp	Leu	Leu	Glu	Lys	Glu	Gly	Glu	Glu	
193			595					600					605				

	_						_	_		-		gca			_	_	1872
196	Asp	Gly	Lys	Thr	Ile	Trp	Ala	Met	Arg	Leu	Lys	Ala	Thr	Leu	Asp	Arg	
197		610					615					620					
	_	~	_			_	_			~	_	ctt					1920
		Arg	Arg	Leu	Thr	Ala	Glu	Tyr	Ser	Asp		Leu	Leu	Gln	Ile	Phe	
	625					630					635					640	
												gga					1968
	Pro	Pro	Asn	Val		Ile	Leu	Gly	Lys		Leu	Gly	Ile	Pro	Glu	Asn	
205					645					650					655		
												gct					2016
	Ser	Val	Lys		Tyr	Thr	Glu	Ala		Ile	Arg	Ala	Gly		Ile	Phe	
209				660					665					670			
												gct					2064
	Gln	Ile		Lys	Leu	Cys	Thr		Leu	Leu	Lys	Ala		Arg	Asn	Ser	
213			675					680					685				
							-	_	_			gga	_	_			2112
	Leu	_	Ser	Glu	Gly	Trp	_	Val	Val	Val	Pro	Gly	Ser	Thr	Ser	Gly	
217		690					695					700					
			_	_	_		_		_	_		tca	_		_		2160
		Leu	Val	Gln	Val		Ser	Ile	Val	Pro	_	Ser	Leu	Pro	Ala		
	705					710					715					720	
								_	_			gct	_		_	_	2208
	Ser	GŢĀ	GIY	Pro		He	Leu	Leu	Val		Lys	Ala	Asp	GIY	_	GIu	
225					725					730					735		00=6
												gtc					2256
	GIU	vaı	Ser		Ата	Asn	GIY	Asn		Ala	GIY	Val	меţ		Leu	GIn	
229				740					745					750			2204
												gcg					2304
	GIU	Leu	755	птѕ	ьeu	ser	нтѕ		GIY	vai	Arg	Ala	_	GIII	GIU	гуя	
233	-++	ata		~+ <i>~</i>	202	+~+	~ a +	760	~~+	~~~	226	~++	765	~~+	a t a	993	2352
												gtt Val					2352
237	116	770	FIIE	vai	1111	Cys	775	Asp	ASP	ASP	пуъ	780	міа	Asp	116	Arg	
	cas		ata	aa a	222	+++		200	tta	m = =	aca	tct	cca	act	cat	ata	2400
	_								_	_	_	Ser					2400
	785	200	·uı	0+1	L ,5	790	· u .	****9	пси	OIU	795	DCI	110			800	
		cta	ata	ctt	tca		aaa	aat	agg	ant		act	tcc	222	tcc		2448
												Thr					2110
245	11011	DCu		шец	805			O ₁	my	810	9	1111	JCI		815	DCI	
	aca	acc	aaa	aaa		gat	aaα	aac	agc		tct	aag	aaa	aaa		gat.	2496
												Lys					2150
249				820		тор	272		825	ЦСС	501	ш, 5	L , 5	830		1101	
	aag	aaσ	agc		tct	atc	gat.	gat.		gaa	tca	aag	act		t.cc	t.ca	2544
												Lys					
253	-1-	-1-	835					840				_, ~	845	1			
	tct	tcc		agc	ctc	ctt	tac	-	tac	aaσ	gat	atc		aqt	qqa	qqa	2592
												Ile					
257		850					855			2	- 1-	860			4	•	
	atc		qca	ctt	qct	qat		qat	qta	сса	act	tct	qat	tca	aaa	tct	2640
			J		J	_	J '	J J	٠				۔ ر ر				

260 Ile Ile Ala Leu Ala Leu Ala Asp Ala Asp Val Pro Thr Ser Gly Ser Lys Ser 261 865 5 670 870 875 875 680 263 gct gca tgt ggt ctt ctt gca tct tta gca gaa gcc tct agt aaa gtg 264 Ala Ala Cys Gly Leu Leu Ala Ser Leu Ala Glu Ala Ser Ser Lys Val 265 885 890 895	
264 Ala Ala Cys Gly Leu Leu Ala Ser Leu Ala Glu Ala Ser Ser Lys Val 265 885 890 895	
264 Ala Ala Cys Gly Leu Leu Ala Ser Leu Ala Glu Ala Ser Ser Lys Val 265 885 890 895	2688
265 885 890 895	
	0536
267 cac agc gaa cac gga gtt ccg gca tca ttt aag gtt cca act gga gtt	2736
268 His Ser Glu His Gly Val Pro Ala Ser Phe Lys Val Pro Thr Gly Val	
269 900 905 910	
271 gtc ata cct ttt gga tcg atg gaa tta gct tta aag caa aat aat tcg	2784
272 Val Ile Pro Phe Gly Ser Met Glu Leu Ala Leu Lys Gln Asn Asn Ser	
273 915 920 925	
275 gaa gaa aag ttt gcg tct ttg cta gaa aaa cta gaa acc gcc aga cct	2832
276 Glu Glu Lys Phe Ala Ser Leu Leu Glu Lys Leu Glu Thr Ala Arg Pro	
•	
	2000
279 gag ggt ggt gag cta gac gac ata tgt gac cag atc cat gaa gtg atg	2880
280 Glu Gly Glu Leu Asp Asp Ile Cys Asp Gln Ile His Glu Val Met	
281 945 950 955 960	
283 aaa acg ttg caa gtg cct aaa gaa aca atc aac agc ata agc aaa gcg	2928
284 Lys Thr Leu Gln Val Pro Lys Glu Thr Ile Asn Ser Ile Ser Lys Ala	
285 965 970 975	•
287 ttt ctc aaa gat gct cgt ctc att gtt cgt tca agt gct aac gtc gag	2976
288 Phe Leu Lys Asp Ala Arg Leu Ile Val Arg Ser Ser Ala Asn Val Glu	
289 980 985 990	
	c 3024
291 gac tta gcc gga atg tca gct gca gga ctc tat gaa tca atc cct aa	
292 Asp Leu Ala Gly Met Ser Ala Ala Gly Leu Tyr Glu Ser Ile Pro As	11
1000	
293 995 1000 1005	
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa	3069
	3069
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa	3069
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln	3069 3114
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020	
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg	
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg 301 1025 1030 1035	3114
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg 301 1025 1030 1035 303 gct gct ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt	
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg 301 1025 1030 1035 303 gct gct ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt 304 Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val	3114
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg 301 1025 1035 1035 303 gct gct ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt 304 Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val 305 1040 1045 1050	3114 3159
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1025 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg 301 1025 1030 1035 303 gct gct ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt 304 Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val 305 1040 1045 307 caa gaa atg ctt tcg ccg gac tta tca ttc gtt ctg cac aca gtg	3114
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg 301 1025 1030 1035 303 gct gct ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt 304 Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val 305 1040 1045 1045 307 caa gaa atg ctt tcg ccg gac tta tca ttc gtt ctg cac aca gtg 308 Gln Glu Met Leu Ser Pro Asp Leu Ser Phe Val Leu His Thr Val	3114 3159
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010	3114 3159 3204
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg 301 1025 1030 1035 303 gct gct ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt 304 Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val 305 1040 1045 1050 307 caa gaa atg ctt tcg ccg gac tta tca ttc gtt ctg cac aca gtg 308 Gln Glu Met Leu Ser Pro Asp Leu Ser Phe Val Leu His Thr Val 309 1055 1060 1065 311 agt cca gct gat ccg gac agt aac ctt gtg gaa gcc gag atc gct	3114 3159
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010	3114 3159 3204
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg 301 1025 1030 1035 303 gct gct ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt 304 Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val 305 1040 1045 1050 307 caa gaa atg ctt tcg ccg gac tta tca ttc gtt ctg cac aca gtg 308 Gln Glu Met Leu Ser Pro Asp Leu Ser Phe Val Leu His Thr Val 309 1055 1060 1065 311 agt cca gct gat ccg gac agt aac ctt gtg gaa gcc gag atc gct	3114 3159 3204
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010	3114 3159 3204
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg 301 1025 1030 1035 1035 303 gct gct ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt gtt ctc gtt 304 Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val Val Leu Val 305 1040 1045 1050 1050 307 caa gaa atg ctt tcg ccg gac tta tca tca ttc gtt ctg cac aca gtg 1060 1065 308 Gln Glu Met Leu Ser Pro Asp Leu Ser Phe Val Leu His Thr Val 1065 311 agt cca gct gat ccg gac agt agt acc ctt gtg gaa gcc gag atc gct 1065 312 Ser Pro Ala Asp Pro Asp Ser Asn Leu Val Glu Ala Glu Ala Glu Ile Ala Glu Ile Ala 313 1070 1075 1080 315 cct ggt tta ggg gag act tta ggt gag act tta ggt gga aca aca aga aga aca aga aga gct tca aga aga aga gct tca atg gga aca aca aga aga gct aca aga a	3114 3159 3204 3249
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010	3114 3159 3204 3249
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Gly Thr Pro 301 1025 303 gct gct ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt 304 Ala Ala Gly Val Ser Gln Arg 305 1040 307 caa gaa atg ctt tcg ccg gac tta tca ttc gtt ctg cac aca gtg 308 Gln Glu Met Leu Ser Pro Asp Leu Ser Phe Val Leu His Thr Val 309 1055 311 agt cca gct gat ccg gac agt aac ctt gtg gaa gcc gag acc gct 312 Ser Pro Ala Asp Pro Asp Ser Asn Leu Val Glu Ala Glu Ile Ala 313 1070 315 cct ggt tta ggt gag act tta gct tca gga aca aga gga aca cca 316 Pro Gly Leu Gly Glu Thr Leu Ala Ser Gly Thr Arg Gly Thr Pro 317 1085	3114 3159 3204 3249 3294
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 gt tct ctc tac aca aga aga gct gt cgt gaa gct gtt cta aga aga gct gtt cgt aga aga gct tca aga aga gct tca gct gtt ctc gt tca gct tca gct tca gct gct tca gct tca gct	3114 3159 3204 3249
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020 1020 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg 301 1025 ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt 304 Ala Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val Leu Val 307 caa gaa atg ctt tcg ccg gac tta tca ttc gtt ctg cac aca gtg 308 Gln Glu Glu Met Leu Ser Pro Asp Leu Ser Phe Val Leu His Thr Val 309 1055 1065 1065 311 agt cca gct gat ccg gac agt aac ctt gtg gaa gcc gag acc gg acc acc acc gg 312 Ser Pro Ala Asp Pro Asp Ser Asn Leu Val Glu Ala Glu Ile Ala 315 cct ggt tta ggt gag act tta ggt gag act tta gct cag gga acc acc acc acc acc acc acc acc	3114 3159 3204 3249 3294
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 299 gtt tgg gct tct ctc tac aca aga agc gtt cta agc cgt aga aga gct gtt cta agc cgt aga gct tct aga aga gct gtt cta aga aga gct tca aga cgt dul lu lu <td< td=""><td>3114 3159 3204 3249 3294 3339</td></td<>	3114 3159 3204 3249 3294 3339
295 gtg agt ccc tcg gat cct ttg gtg ttt tca gat tcg gtt tgc caa 296 Val Ser Pro Ser Asp Pro Leu Val Phe Ser Asp Ser Val Cys Gln 297 1010 1015 1020 1020 299 gtt tgg gct tct ctc tac aca aga aga gct gtt cta agc cgt aga 300 Val Trp Ala Ser Leu Tyr Thr Arg Arg Ala Val Leu Ser Arg Arg 301 1025 ggt gtc tct caa aga gaa gct tca atg gct gtt ctc gtt 304 Ala Ala Ala Gly Val Ser Gln Arg Glu Ala Ser Met Ala Val Leu Val Leu Val 307 caa gaa atg ctt tcg ccg gac tta tca ttc gtt ctg cac aca gtg 308 Gln Glu Glu Met Leu Ser Pro Asp Leu Ser Phe Val Leu His Thr Val 309 1055 1065 1065 311 agt cca gct gat ccg gac agt aac ctt gtg gaa gcc gag acc gg acc acc acc gg 312 Ser Pro Ala Asp Pro Asp Ser Asn Leu Val Glu Ala Glu Ile Ala 315 cct ggt tta ggt gag act tta ggt gag act tta gct cag gga acc acc acc acc acc acc acc acc	3114 3159 3204 3249 3294

Input Set : N:\RJAVED\10591432.txt

Output Set: N:\CRF4\09132006\J591432.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:1; Line(s) 8

VERIFICATION SUMMARY DATE: 09/13/2006
PATENT APPLICATION: US/10/591,432 TIME: 13:16:44

Input Set : N:\RJAVED\10591432.txt

Output Set: N:\CRF4\09132006\J591432.raw

L:12 M:270 C: Current Application Number differs, Replaced Current Application Number L:42 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:1,Line#:39
L:670 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:3,Line#:667
L:1321 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:6,Line#:1314
L:2127 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:8,Line#:2120
L:2871 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:10,Line#:2864
L:3665 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:12,Line#:3658
L:4443 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:14,Line#:4436
L:5231 M:258 W: Mandatory Feature missing, <223> Blank for SEQ#:16,Line#:5224